

Appl. No. 10/800,455  
Atty. Docket No.: 2004B019  
Amend. Dated June 14, 2007  
Response to OA dated March 14, 2007

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**Amendments to the Claims:**

This listing of claims will replace all prior versions and listing of claims in this application.

**Listing of Claims:**

1-13 Canceled

14. (Currently Amended): A nanocomposite, comprising:

a) at least one first non-functionalized polypropylene present in the nanocomposite at from  $\geq 10$  to  $\leq 98$  wt%, based on the total weight of the nanocomposite, said first non-functionalized polypropylene having an  $M_w/M_n$  of 1.8 to 3;

b) at least one second polypropylene comprising stabilization functionality, said stabilization functionality selected from one or more of phenols, ketones, hindered amines, substituted phenols, substituted ketones, substituted hindered amines, or combinations thereof, and said stabilization functionality being present in said stabilization functionalized polypropylene from  $\geq 0.05$  to  $\leq 15$  wt%, based on the total weight of said of the polypropylene comprising stabilization functionality, where the second polypropylene comprising stabilization functionality is present in said nanocomposite at from  $\geq 10$  to  $\leq 90$  wt. %, based on the total weight of the nanocomposite;

c) an organo-clay selected from one or more of montmorillonite, sodium montmorillonite, calcium montmorillonite, magnesium montmorillonite, nontronite, beidellite, volkonskoite, laponite, hectorite, saponite, sauconite, magadite, kenyaite, sobockite, svindordite, stevensite, vermiculite, halloysite, aluminate oxides, hydrotalcite, illite, rectorite, tarosovite, ledikite or fluorine mica, and wherein said organo-clay is present in said nanocomposite from  $\geq 1$  or  $\leq 30$  weight %, based on the total weight of the nanocomposite, and where the nanoclay further comprises one or more of hexyl ammonium ion, octyl ammonium ion, 2-ethylhexyl ammonium ion, dodecyl ammonium ion, octadecyl ammonium ion, dioctyl dimethyl ammonium ion, trioctyl ammonium ion, distearyl ammonium ion, ammonium salt, pyridinium salt, sulfonium salt, phosphonium salt; and

d) optionally, an ethylene-propylene elastomeric copolymer or an isobutylene

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rubber present in the nanocomposite at  $\geq 2$  to  $\leq 70$  wt%, based on the total weight of the nanocomposite.

15. (Original): A blend comprising an organo-clay and at least one stabilization functionalized thermoplastic polyolefin represented by the formula:



wherein

each  $R^1$  is independently selected from a  $C_1$  to  $C_{20}$  aliphatic;  $C_1$  to  $C_{20}$  aromatic; substituted  $C_1$  to  $C_{20}$  aliphatic; substituted  $C_1$  to  $C_{20}$  aromatic;  $C_1$  to  $C_{20}$  aliphatic ester;  $C_1$  to  $C_{20}$  aliphatic ether;  $C_1$  to  $C_{20}$  aliphatic amide;  $C_1$  to  $C_{20}$  aliphatic imide;

$n$  is the number of stabilization functional/bridging groups bound to  $T$  and is a number from 1 to 300;

$G$  is selected from one or more of phenols, ketones, hindered amines, substituted phenols, substituted ketones, substituted hindered amines, or combinations thereof; and

$T$  represents a thermoplastic polyolefin.

16. Canceled

17. (Original): A fabricated article comprising the nanocomposite of claim 14.

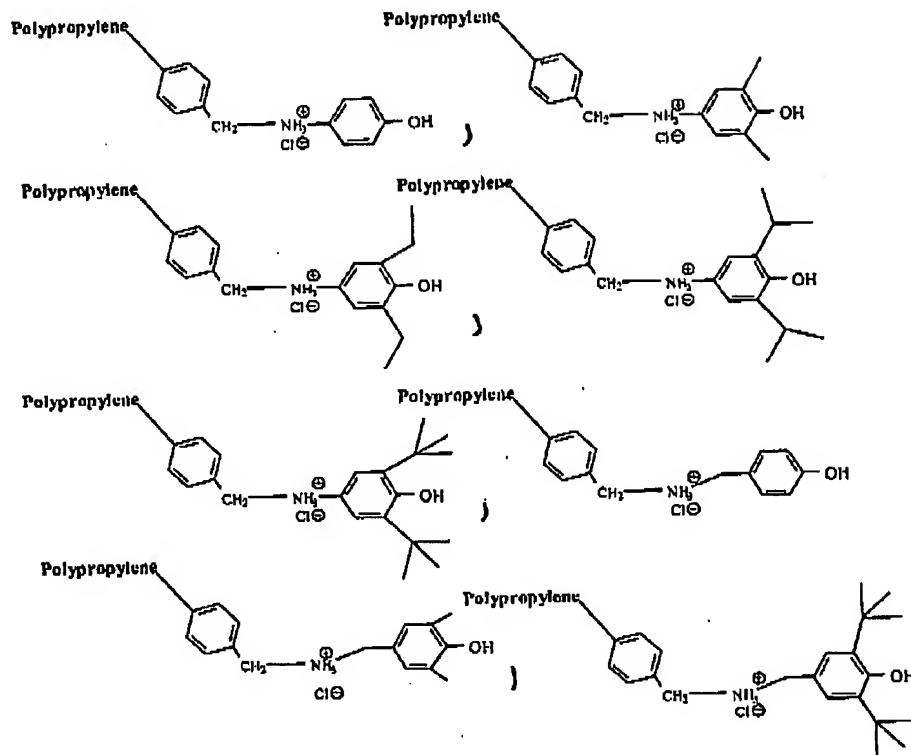
18. (Original): A fabricated article comprising the nanocomposite of claim 15.

19. (Original): An automotive part or an appliance part comprising the nanocomposite of claim 14.

20. (Original): An automotive part or an appliance part comprising the nanocomposite of claim 15.

21. (New) The blend of Claim 15 wherein the at least one stabilization functionalized thermoplastic polyolefin is selected from the group consisting of:

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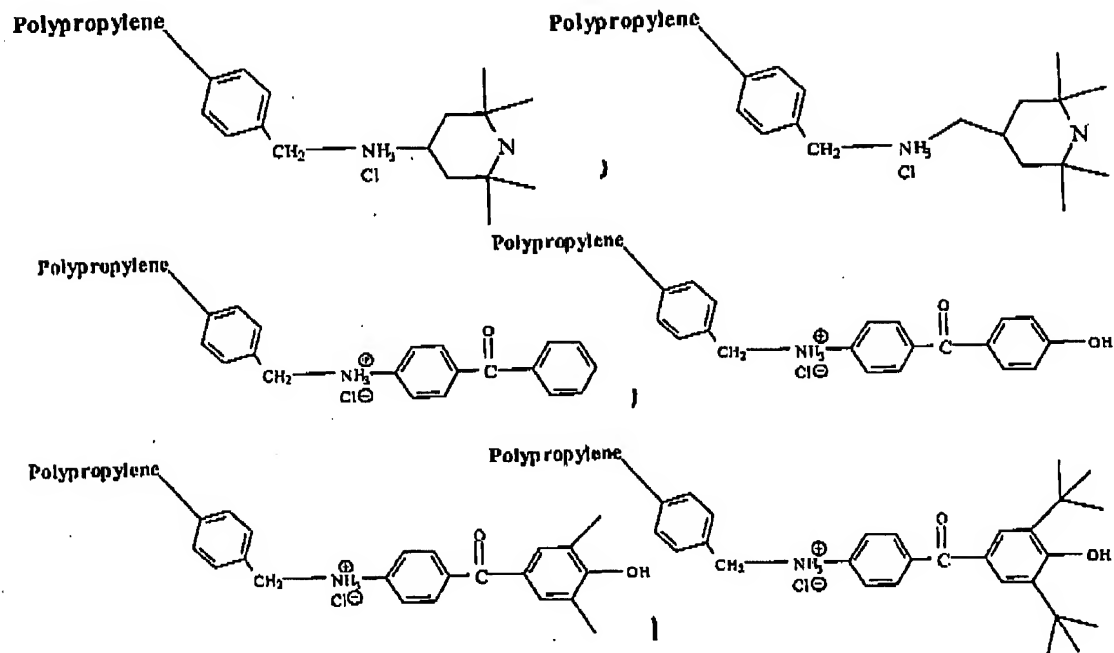


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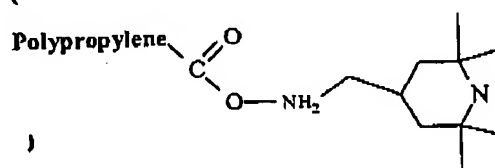
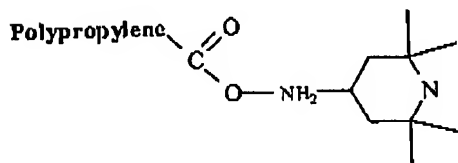
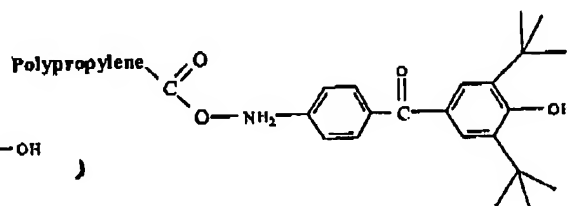
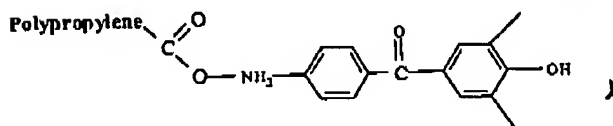
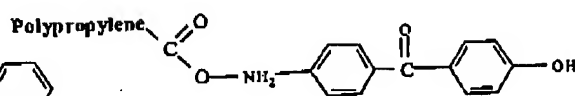
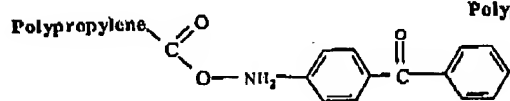
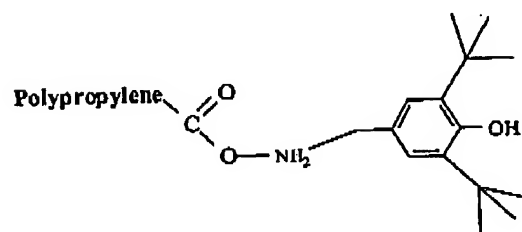
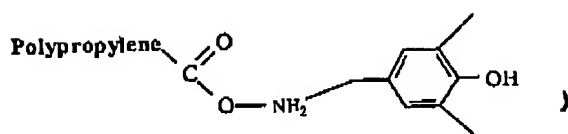
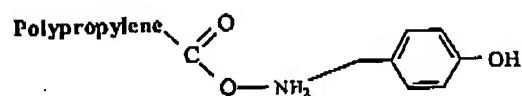
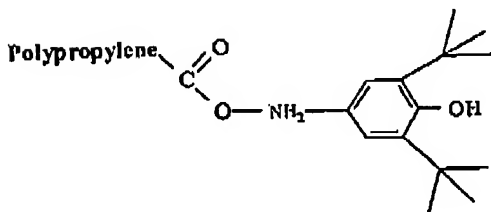
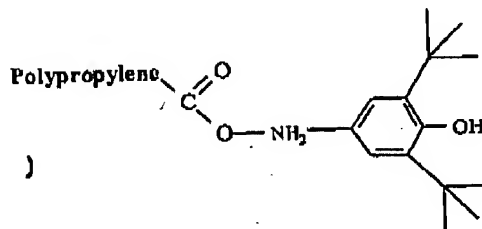
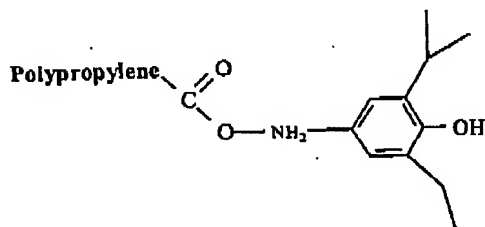
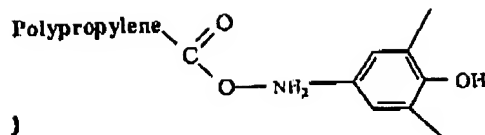
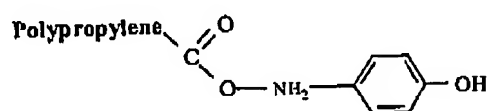
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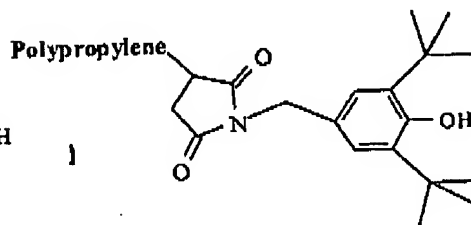
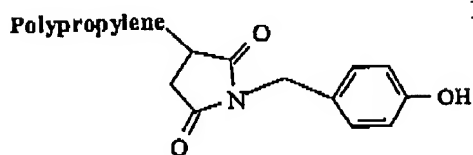
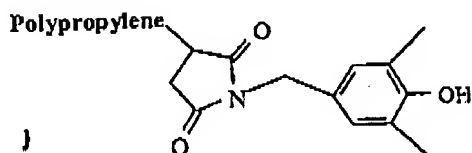
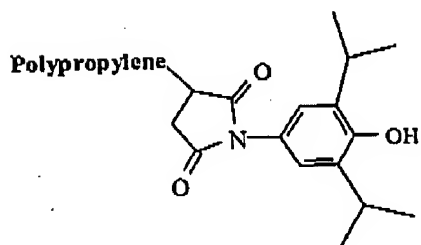
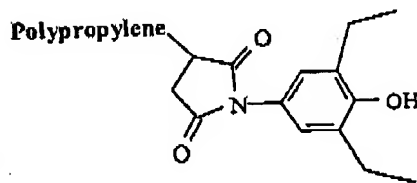
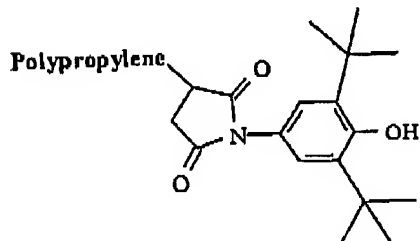
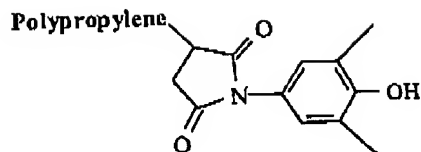
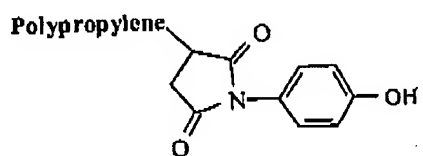
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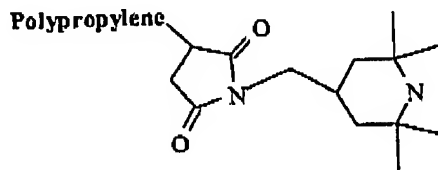
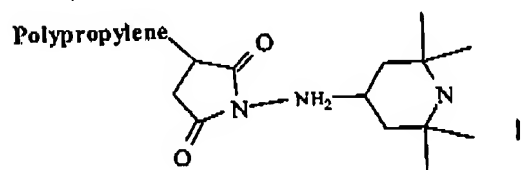
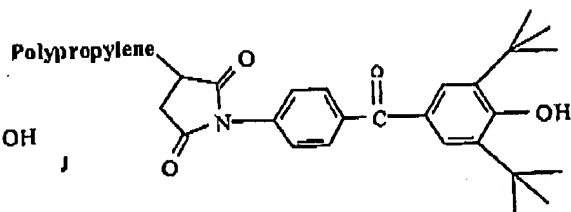
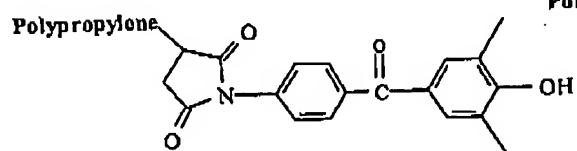
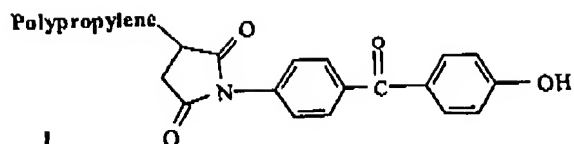
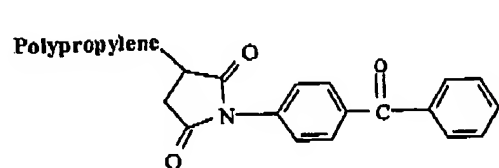


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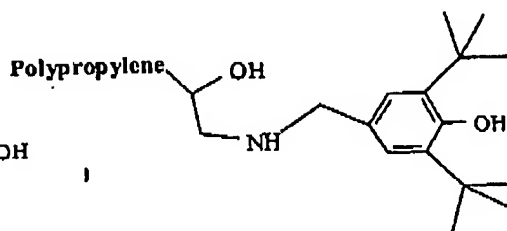
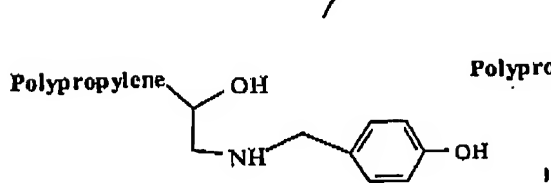
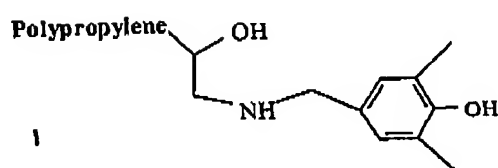
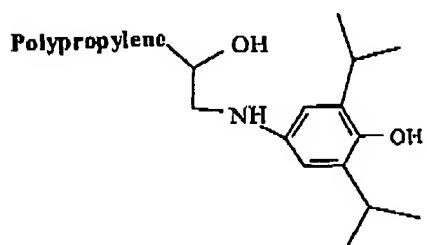
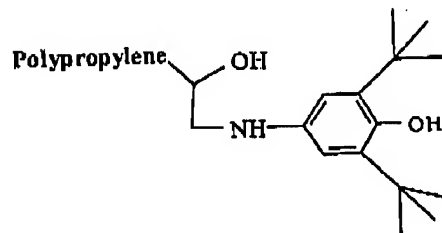
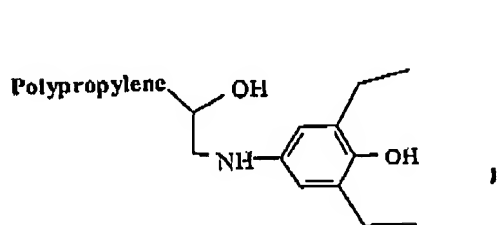
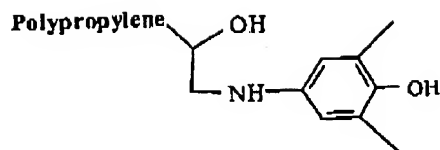
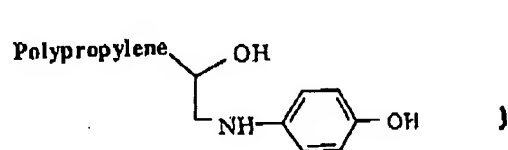


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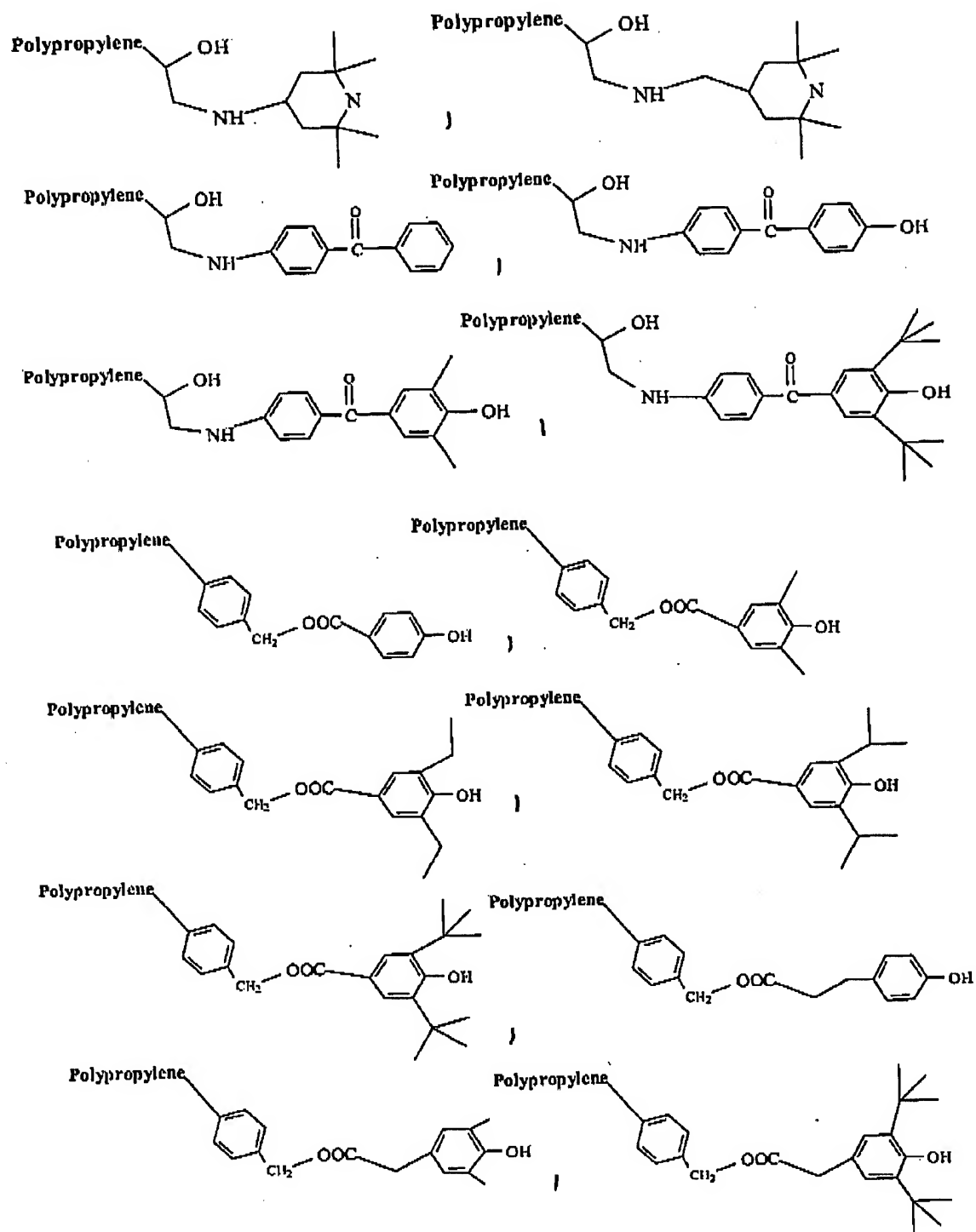


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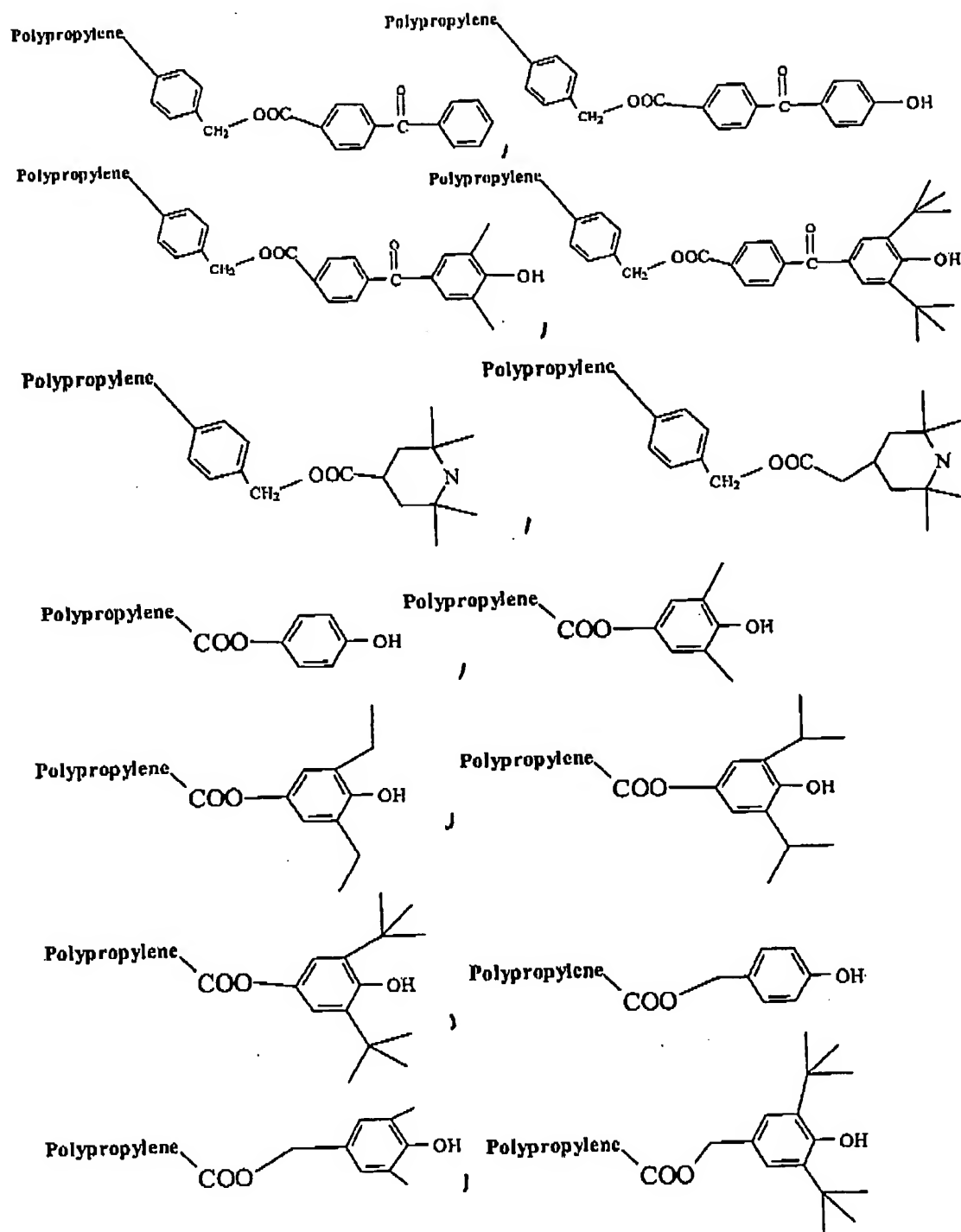


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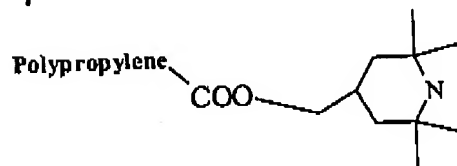
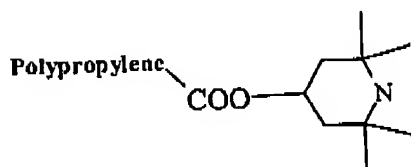
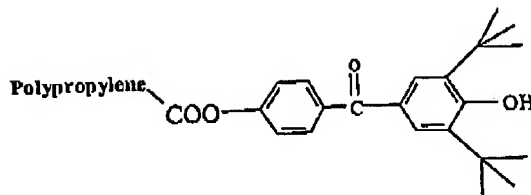
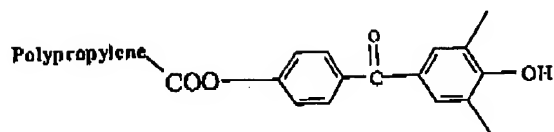
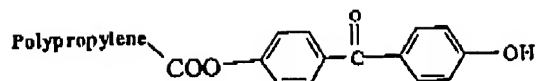
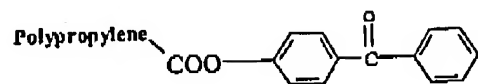


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